

IN THE CLAIMS:

The status and content of each claim follows.

1. (currently amended) A jettable solution on an edible structure; comprising:  
said edible structure including one of a polymeric organic film former or a paper  
organic film former;

said jettable solution including:

an oil;

an edible surfactant;

an aqueous solution;

~~a drying agent;~~ and

a pharmaceutically active ingredient solubilized into said oil;

in which said oil, said pharmaceutically active ingredient, said surfactant, and said aqueous solution form a microemulsion;

in which said jettable solution comprises a viscosity of less than approximately 5 centipoise and a surface tension approximately between 25 to 60 dynes per centimeter.

2. (previously presented) The jettable solution of claim 1, wherein said pharmaceutically active ingredient comprises a water insoluble pharmaceutically active ingredient.

3. (currently amended) The jettable solution of claim 2, wherein said pharmaceutically active ingredient is selected from the group consisting of a water insoluble peptide, an antimicrobial, a proton pump inhibitor, a calcium channel blocker, a beta blocker,

a steroid, an antioxidant, a rennin inhibitor, an alkaloid, a cytostatica, an anti-coagulant, a lipid regulating agent, an anti-depressant, a neuroleptic, an immunosuppressant, an immunomodulator, an antibiotic, an ~~antineoplastic~~ antineoplastic, a paclitaxel, a taxol, a tyloxapol, a docetaxel, a lovastatin, an indometacine, a diclofenac, a naproxen, a dexibuprofen, rofecoxib, celecoxib, a celecoxib nitrendipine, a flurbiprofen, a diclofenac, a ketoprofen, a piroxicam, a tenoxicam, a vincristine, a vinblastine, an insulin, a calcitonin, an erythropoietin, a cephalosporin, a desmopressin, an etoposide, a leuprolide, or a cyclosporin including one of cyclosporin A, dihydrocyclosporin C, dihydrocyclosporin D, and cyclosporin D.

4. (original) The jettable solution of claim 1, wherein said oil and said surfactant form a plurality of micelles in said aqueous solution.

5. (previously presented) The jettable solution of claim 1, wherein said oil comprises one of a castor oil, an oleic acid and an oleyl alcohol, a mineral oil, a cottonseed oil, a squalene, a safflower oil, or a fatty ester.

6-8. (cancelled)

9. (previously presented) The jettable solution of claim 1, wherein said aqueous solution and said surfactant form a plurality of micelles in said oil.

10. (currently amended) The jettable solution of claim 1, wherein said surfactant comprises one of a sphingolipid, a galacto lipid, an ethoxylated castor oil, a polyoxyl 40

hydrogenated castor oil, an ethoxylated fatty ester, a sucrose fatty ester, a sorbitol, a sorbitan, a ~~polyoxyethylene~~ polyoxyethylene derivative, an alkyl glucoside, an alkyl-polyglucoside, an ethoxylated mono-hydroxy stearic acid, a bile salt, a polyoxyethylene-sorbitan monooleate, a polyoxyethylene-sorbitan monopalmitate, a polyoxyethylene-sorbitan monolaurate, nicotinamide, a polyoxyethylene sorbitan monostearate, cholic acid or bile salts, nicotinic acid and nicotinamide derivatives, acetyline alcohols, polyhydroxylated alcohols, aromatic sulfonate salts, xylene sulfonates, naphthalene sulfonates, cymene sulfonate, and Ethylene Oxide-Propylene Oxide block polymers.

11. (original) The jettable solution of claim 1, wherein said surfactant comprises an ion-pair formation between an amino acid and a fatty acid.

12. (original) The jettable solution of claim 11, wherein:  
said amino acid comprises one of an L- arginine or an L-lysine; and  
said fatty acid comprises one of a stearic acid or an oleic acid.

13. (original) The jettable solution of claim 1, further comprising an edible solvent.

14. (previously presented) The jettable solution of claim 13, further comprising a salt.

15. (currently amended) The jettable solution of claim 1, further comprising one of a biocide, a viscosity modifier, a humectant, an antifoaming agent, a surface tension adjusting agent, a rheology adjusting agent, a drying agent, a color, or an acrylic polymer.
16. (cancelled)
17. (previously presented) The jettable solution of claim 1, wherein a pharmaceutical release rate of said solution is selectively adjusted by varying the type of said oil.
18. (previously presented) The jettable solution of claim 1, in which the edible surfactant comprises approximately 5% L-arginine by volume of the jettable solution and approximately 6% stearic acid by volume of the jettable solution; the oil comprises approximately 15% soy bean oil by volume of the jettable solution; and the remainder comprises said aqueous solution.
19. (withdrawn/currently amended) A method for forming a jettable pharmaceutical based microemulsion comprising:
- preparing a microemulsion; and
  - dispensing a water insoluble pharmaceutical into said microemulsion;
- in which said jettable pharmaceutical based microemulsion comprises a jettable solution comprising:
- an oil;
  - an edible surfactant;

an aqueous solution;  
~~a drying agent;~~ and  
a pharmaceutically active ingredient solubilized into said oil;  
in which said oil, said pharmaceutically active ingredient, said surfactant, and  
said aqueous solution form said microemulsion; and  
in which said microemulsion comprises a viscosity of less than approximately  
5 centipoise and a surface tension approximately between 25 to 60 dynes per centimeter.

20. (withdrawn/previously presented) The method of claim 19, wherein said  
preparing a microemulsion comprises:

combining said oil, said edible surfactant, and said aqueous solution;  
and  
said combination resulting in a formation of a plurality of micelles emulsified  
in a solution.

21. (withdrawn) The method of claim 20, wherein said preparing a microemulsion  
further comprises agitating said combination.

22. (withdrawn) The method of claim 20, wherein said preparing a microemulsion  
further comprises adding thermal energy to said combination.

23. (withdrawn) The method of claim 20, wherein said oil comprises one of a  
castor oil, an oleic acid and an oleyl alcohol, a coconut oil, a mineral oil, a cottonseed oil, a  
squalene, a safflower oil, or a fatty ester.

24. (withdrawn/currently amended) The method of claim 19, wherein said pharmaceutically active ingredient is selected from the group consisting of a water insoluble ~~peptides~~ peptide, an antimicrobial, a proton pump inhibitor, a calcium channel blocker, a beta blocker, an anesthetic, a steroid, an antioxidant, a rennin inhibitor, an alkaloid, a cytostatica, an anti-coagulant, a lipid regulating agent, an anti-depressant, a neuroleptic, an immunosuppressant, an immunomodulator, an antibiotic, an anti-inflammatory agent, an antineoplastic, a paclitaxel, a taxol, a tyloxapol, a docetaxel, a lovastatin, an indometacine, a diclofenac, a naproxen, a dexibuprofen, a rofecoxib, a celecoxib, a celecoxib nitrendipine, a flurbiprofen, a diclofenac, a ketoprofen, a piroxicam, a tenoxicam, a vincristine, a vinblastine, an insulin, a calcitonin, an erythropoietin, a cephalosporin, a desmopressin, an etoposide, a leuprolide, or a cyclosporin including cyclosporin A, dihydrocyclosporin C, dihydrocyclosporin D, or cyclosporin D, and derivatives thereof.

25. (cancelled)

26. (withdrawn/currently amended) The method of claim 20, wherein said edible surfactant comprises one of a lecithin, a sphingolipid, a galacto lipid, an ethoxylated castor oil, a polyoxyl 40 hydrogenated castor oil, an ethoxylated fatty ester, a sucrose fatty ester, a sorbitol, [[,]]a sorbitan, a ~~polyoxyethylene~~ polyoxyethylene derivative, an alkyl glucoside, an alkyl polyglucoside, an ethoxylated mono-hydroxy stearic acid, a bile salt, a polyoxyethylene-sorbitan monooleate, a polyoxyethylene-sorbitan monopalmitate, a polyoxyethylene-sorbitan monolaurate, a polyoxyethylene sorbitan monostearate, cholic acid or bile salts, nicotinic acid and nicotinamide derivatives, ~~acetylaine~~ acetylaine alcohols, polyhydroxylated alcohols, aromatic sulfonate salts including one of xylene sulfonates,

naphthalene sulfonates, cymene sulfonate, or Ethylene Oxide-Propylene Oxide block polymers.

27. (withdrawn) The method of claim 20, wherein said edible surfactant comprises an ion-pair formation between an amino acid and a fatty acid.

28. (withdrawn) The method of claim 27, wherein:  
said amino acid comprises one of an L- arginine or an L-lysine; and  
said fatty acid comprises one of a stearic acid or an oleic acid.

29. (withdrawn/currently amended) A method for forming a jettable pharmaceutical based microemulsion comprising:  
dissolving a pharmaceutically active ingredient in a pharmaceutical solubilizing oil; and  
combining said dissolved pharmaceutically active ingredient in an oil with an aqueous solution and an edible surfactant;  
in which said jettable pharmaceutical based microemulsion comprises a jettable solution comprising:  
said oil;  
said edible surfactant;  
said aqueous solution;  
~~a drying agent;~~ and  
said pharmaceutically active ingredient solubilized into said oil;

in which said oil, said pharmaceutically active ingredient, said surfactant, and said aqueous solution form said microemulsion; and

in which said jettable solution comprises a viscosity of less than approximately 5 centipoise and a surface tension approximately between 25 to 60 dynes per centimeter.

30. (withdrawn) The method of claim 29, wherein said dissolving further comprises mixing said pharmaceutical and said naturally occurring pharmaceutical solubilizing oil until a semi transparent or transparent liquid results.

31. (withdrawn) The method of claim 29, further comprising agitating said combination to facilitate a formation of said microemulsion.

32. (withdrawn) The method of claim 29, further comprising adding thermal energy to said combination to expedite a formation of said microemulsion.

33. (withdrawn/currently amended) A method for forming an oral medication comprising:

presenting an edible structure adjacent to ~~an~~ a jetting fluid dispenser; and selectively dispensing a jettable pharmaceutical based microemulsion from said jetting fluid dispenser onto said edible structure

in which said jettable pharmaceutical based microemulsion comprises a jettable solution comprising:

an oil;



an aqueous solution;  
~~a drying agent; and~~  
a pharmaceutically active ingredient solubilized into said oil;  
in which said oil, said pharmaceutically active ingredient, said surfactant, and  
said aqueous solution form said microemulsion; and  
in which said jettable solution comprises a viscosity of less than  
approximately 5 centipoise and a surface tension approximately between 25 to 60 dynes per  
centimeter.

34. (withdrawn) The method of claim 33, wherein said jetting fluid dispenser  
comprises one of a thermally actuated inkjet dispenser, a mechanically actuated inkjet  
dispenser, an electro-statically actuated inkjet dispenser, a magnetically actuated dispenser, a  
piezo-electrically actuated inkjet dispenser, or a continuous inkjet dispenser.

35. (withdrawn) The method of claim 33, wherein said selectively dispensing  
comprises dispensing a predetermined dosage of said jettable pharmaceutical based  
microemulsion.

36. (withdrawn) The method of claim 33, wherein said edible structure comprises  
one of a polymeric or paper organic film former.

37. (withdrawn/currently amended) The method of claim 33, wherein said [[a]]  
jettable pharmaceutical based microemulsion comprises:

said aqueous solution; and  
an oil based micelle, said micelle including a pharmaceutically active ingredient payload.

38. (withdrawn) The method of claim 33, further comprising dividing said edible structure into a plurality of single oral doses.

39. (withdrawn/currently amended) The method of claim 33, further comprising selectively dispensing a plurality of [[a]] jettable pharmaceutical based microemulsions onto said edible structure, said plurality of aqueous pharmaceutically active ingredients forming a combination therapy.

40. (withdrawn/currently amended) A system for dispensing an oral medication comprising:

an edible structure; and  
a jettable pharmaceutical based microemulsion configured to be dispensed onto said edible structure;

in which said jettable pharmaceutical based microemulsion comprises a jettable solution comprising:

an oil;  
an edible surfactant;  
an aqueous solution;  
~~a drying agent;~~ and  
a pharmaceutically active ingredient solubilized into said oil;

in which said oil, said pharmaceutically active ingredient, said surfactant, and said aqueous solution form said microemulsion; and

in which said jettable solution comprises a viscosity of less than approximately 5 centipoise and a surface tension approximately between 25 to 60 dynes per centimeter.

41. (withdrawn) The system of claim 40, wherein said edible structure comprises one of a rice starch based paper, a potato starch based paper, or an edible polymer.

42. (withdrawn/currently amended) The system of claim 40, further comprising:  
a computing device disposed adjacent to said edible structure;  
an inkjet material dispenser communicatively coupled to said computing device; and

a material reservoir fluidly coupled to said inkjet material dispenser, said material reservoir being configured to supply said [[a]] jettable pharmaceutical based microemulsion to said inkjet material dispenser.

43. (withdrawn) The system of claim 42, wherein said computing device comprises one of a personal computer, a laptop computer, a personal digital assistant, or a cellular telephone.

44. (withdrawn) The system of claim 42, wherein said inkjet material dispenser comprises one of a thermally actuated inkjet dispenser, a mechanically actuated inkjet

dispenser, an electro-statically actuated inkjet dispenser, a magnetically actuated dispenser, a piezo-electrically actuated inkjet dispenser, or a continuous inkjet dispenser.

45. (currently amended) A jettable solution on an edible structure; comprising:  
said edible structure including one of a polymeric organic film former or a paper  
organic film former;

said jettable solution including:

a water insoluble pharmaceutically active ingredient;

~~a drying agent;~~ and

a means for forming an emulsion including said pharmaceutically active ingredient,

in which said means for forming an emulsion is configured to create said jettable solution with a viscosity of less than approximately 5 centipoise and a surface tension approximately between 25 to 60 dynes per centimeter.

46. (previously presented) The jettable solution of claim 45, wherein said jettable solution further comprises a means for stably dispersing said emulsion.

47. (withdrawn/currently amended) A system for dispensing an oral solution comprising:

an edible means for receiving a pharmaceutical payload solution; and

a jettable pharmaceutical based microemulsion configured to be dispensed onto said means for receiving a pharmaceutical payload solution;

in which said jettable pharmaceutical based microemulsion comprises a jettable solution comprising:

an oil;

an edible surfactant;

an aqueous solution;

~~a drying agent;~~ and

a pharmaceutically active ingredient solubilized into said oil;

in which said oil, said pharmaceutically active ingredient, said surfactant, and said aqueous solution form said microemulsion; and

in which said jettable solution comprises a viscosity of less than approximately 5 centipoise and a surface tension approximately between 25 to 60 dynes per centimeter.

48. (withdrawn/previously presented) The system of claim 47, wherein said edible means for receiving a pharmaceutically active ingredient payload solution comprises one of a rice starch based paper, a potato starch based paper, or an edible polymer.

49. (withdrawn/currently amended) The system of claim 47, further comprising:

a means for computing disposed adjacent to said edible structure;

a means for selectively dispensing said pharmaceutical payload solution

communicatively coupled to said means for computing; and

a material reservoir fluidly coupled to said means for selectively dispensing said pharmaceutical payload solution, said material reservoir being configured to supply said [[a]] jettable pharmaceutical based microemulsion to said inkjet material dispenser.